



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| | | | |
|-------------------|--|------------------------|----------------|
| Applicant: | YAMAGATA et al. | Examiner: | unknown |
| Serial No.: | 10/037,866 | Group Art Unit: | 2821 |
| Filed: | October 24, 2001 | Docket: | 10873.0326USD1 |
| Confirmation No.: | 5239 | Notice of Allow. Date: | n/a |
| Due Date: | n/a | | |
| Title: | DEVICE FOR CALCULATING DIFFRACTION EFFICIENCIES OF A DIFFRACTION LENS, LENS WITH GRATING ELEMENT, AND OPTICAL SYSTEM FOR READING | | |

CERTIFICATE UNDER 37 CFR 1.8:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on May 2, 2003.

By: 

Name: Sarah Monfeldt

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

We are transmitting herewith the attached:

- ☒ Transmittal Sheet in duplicate containing Certificate of Mailing
- ☒ Supplemental Information Disclosure Statement, Form 1449, 3 Reference(s)
- ☒ Other: Japanese Office Action dated May 23, 2000 and Japanese Office Action dated April 25, 2002.
- ☒ Return postcard

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers or any future reply, if appropriate. Please charge any additional fees or credit overpayment to Deposit Account No. 13-2725. A duplicate of this sheet is enclosed.

MERCHANT & GOULD P.C.
P.O. Box 2903, Minneapolis, MN 55402-0903
612.332.5300

By: 

Name: Douglas P. Mueller

Reg. No.: 30,300

D. Mueller:smm



RECEIVED
MAY 8 2003
1500-0000-0000

(PTO TRANSMITTAL - GENERAL)



2821

S/N 10/037,866

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| | | | |
|-------------|--|-----------------|----------------|
| Applicant: | YAMAGATA et al. | Examiner: | unknown |
| Serial No.: | 10/037,866 | Group Art Unit: | 2821 |
| Filed: | October 24, 2001 | Docket No.: | 10873.0326USD1 |
| Title: | DEVICE FOR CALCULATING DIFFRACTION EFFICIENCIES OF A DIFFRACTION LENS, LENS WITH GRATING ELEMENT, AND OPTICAL SYSTEM FOR READING | | |

CERTIFICATE UNDER 37 CFR 1.8:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, Mail Stop Patent Application, P.O. Box 1450, Alexandria, VA 22313-1450 on May 2, 2003.

By: 

Name: Sarah Monfeldt

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT (37 C.F.R. § 1.97(b))

Mail Stop Patent Application

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

With regard to the above-identified application, the items of information listed on the enclosed Form 1449 are brought to the attention of the Examiner.

This statement should be considered because it is submitted before the mailing date of a first Office Action on-the-merits. Accordingly, no fee is due for consideration of the items listed on the enclosed Form 1449.

In accordance with 37 C.F.R. § 1.98(a)(2), a copy of each document or other information listed on the enclosed Form 1449 is provided.

A concise explanation of the relevance of each non-English language document or other information is as follows (37 C.F.R. § 1.98(a)(3)):

Enclosed is Japanese Office Action dated May 23, 2000, citing Georgia Institute Of Technology, "Diffraction Optics Work Shop", March 21-24, 1995.

RECEIVED
MAY 2 2003
COMM. FOR PAT.

Enclosed is JP Office Action dated April 25, 2002, citing Hugh D. Young, "Physics", Extended Version with Modern Physics, p 1056 and John M. Cowley, "Diffraction Physics", pp 44-46 .

No representation is made that a reference is "prior art" within the meaning of 35 U.S.C. §§ 102 and 103 and Applicants reserve the right, pursuant to 37 C.F.R. § 1.131 or otherwise, to establish that the reference(s) are not "prior art." Moreover, Applicants do not represent that a reference has been thoroughly reviewed or that any relevance of any portion of a reference is intended.

Consideration of the items listed is respectfully requested. Pursuant to the provisions of M.P.E.P. 609, it is requested that the Examiner return a copy of the attached Form 1449, marked as being considered and initialed by the Examiner, to the undersigned with the next official communication.

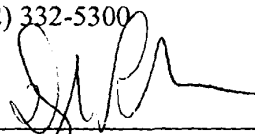
Please charge any additional fees or credit any overpayment to Deposit Account No. 13-2725.

Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300

Dated: May 2, 2003

By



Douglas P. Mueller
Reg. No. 30,300

DPM:mmm

FORM 1449*

INFORMATION DISCLOSURE STATEMENT

Docket Number:

10873.0326USD1

Application Number:

10/037,866

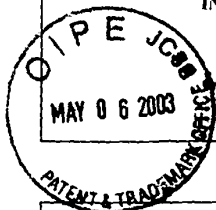
IN AN APPLICATION

(Use several sheets if necessary)

Applicant: YAMAGATA et al.

Filing Date: October 24,
2001

Group Art Unit: 2821



U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NO. | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---------------------|--------------|------|------|-------|----------|-------------------------------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

FOREIGN PATENT DOCUMENTS

| | DOCUMENT NO. | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
|--|--------------|------|---------|-------|----------|-------------|----|
| | | | | | | YES | NO |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | |
|--|--|
| | Georgia Institute Of Technology, "Diffractive Optics Work Shop", March 21-24, 1995 |
| | Hugh D. Young, "Physics", Extended Version with Modern Physics, p 1056 |
| | John M. Cowley, "Diffraction Physics", pp 44-46 |
| | |



23552

PATENT TRADEMARK OFFICE

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.

正本

經濟部智慧財產局專利核駁審定書

受文者：松下電器產業股份有限公司（代理人：

林鑑珠 先生）

地址：台北市長安東路二段一一二號九樓

發文日期：中華民國八十九年五月二十三日

發文字號：（八九）智專一（四）02034字

第〇八九八三〇〇七三八三號



分類：G02B 3/08, 27/42, 13/24

一、申請案號數：〇八七一五二〇〇

二、發明名稱：繞射鏡之繞射效率計算裝置，具有光柵元件之透鏡及讀取光學系統

三、申請人：

名稱：松下電器產業股份有限公司

地址：日本

四、專利代理人：

姓名：林鑑珠 先生

地址：台北市長安東路二段一一二號九樓

五、申請日期：八十七年九月十一日

六、優先權項目：

1 1997/09/24 日本258132



裝

訂

線

2 1997/10/03 日本270933

3 1997/11/20 日本320127

七、審查委員姓名：李孝文 委員

八、審定內容：

主文：本案應不予專利。

依據：專利法第二十條第二項。

理由：

(一) 本案「繞射鏡之繞射效率計算裝置，具有光柵元件之透鏡及讀取光學系統」，主要係揭示一除色繞射鏡之設計技術及利用鑽石切削加工機所製做繞射鏡模具之繞射效率的計算技術。

(二) 申請專利範圍第一項至第十二項所述之方程式及／或演算機構，係一標準的繞射效率計算方法及／或計算裝置，如Diffraction Optics WORK SHOP (Georgia Institute of Technology, March 21-24, 1995)中所揭示。除此之外，整個的演算流程及所配合的車削加工量測資料，亦係一標準的電腦輔助設計及製造加工系統。不符合發明專利要件之進步性。

(三) 申請專利範圍第十三項至第十四項係關於透鏡及／或模具之量測描述，及簡易之繞射光學效率計算應用。為該領域者所熟知，故不符合發明專利要件之進步性。

裝
訂
線

(四) 申請專利範圍第十五項至第四十九項係關於繞射鏡之光學像差及繞射效率之計算，亦係一標準的繞射效率計算方法及／或計算裝置，如Code V光學計算軟體即具備上述功能，故亦不具進步性。

(五) 綜上所述，本案係運用申請前既有之技術，所揭示之各技術內容係為熟習該項技術者所熟知，不符發明專利要件。

據上論結，本案不符法定專利要件，爰依專利法第二十條第二項，審定如主文。

局長
陳明邦

依照分層負責規定授權單位主管決行

如不服本審定，得於文到之次日起三十日內，備具再審查理由書一式二份及規費新台幣參仟伍百元整，向本局申請再審查。

經濟部智慧財產局專利再審查案核駁理由先行通知書

受文者：松下電器產業股份有限公司（代理人
：林鑑珠 先生）

地址：台北市長安東路二段一二號九樓

發文日期：中華民國九十一年四月二十五日

發文文號：（九一）智專三（一）0831字
第〇九一八二〇〇二〇五八號

主旨：第〇八七一—一五二〇〇號專利再審查案經審查後發現尚有如說明欄所述不明確之處，台端（貴公司）若有具體反證資料或說明，請於文到次日起六十日內提出申復說明及有關反證資料一式二份（本案如有修正應繳修正規費新台幣壹仟元正）。若希望來局當面示範或說明，請於申復說明書內註明「申請面詢」，本局認為有必要時，另安排地點、時間舉辦「面詢」，並繳交規費新台幣貳仟元正。若限期內不提出申復資料，不得要求延期，本局依現有資料進行審定，以免本局案件積案太多。

說明：本案「繞射鏡之繞射效率計算裝置，具有光柵元件之透鏡及讀取光學系統」。誠如「再審查理由書」所述，本案設計主要係「計算每一環節……之繞射效率，藉由各環帶……之重疊率並將其合計而求得繞射鏡全體之繞射效率」。然全體繞射率包括來自各環帶的繞射波，自然應依單一繞射率與重疊率的迴旋積（convolution product）計算，此係一自然法則（如附件一中所揭示）。亦已見於標準的「雙狹縫及多狹縫干涉」之繞射強度隨位置變化關係之計算中（如附件二正如初審審定書理由所述及其引證資料所顯示，本案「所述之方程式及／或演算機構，係一標準的方式及裝置……不具進步性」。另外，「再審查理由書」另一重點則闡述初審引證資料「並未揭示有關利用鑽石車刀切削加工之繞射之繞射鏡之繞射率計算方法」，然繞射率之計算方式

僅與光柵元件之結構有關，而與是否利用鑽石車刀加工成形無關。上述習知之計算方式自然包括利用鑽石車刀成形之繞射鏡者。本案並未對該類技藝作創新或新穎設計，其設計不脫離前述之技術範疇，不具進步性。綜上所述，本案係運用申請前既有之技術，而為熟習該項技術者所能輕易完成者，依專利法第二十條第二項規定，難謂符合發明專利要件。

經濟部智慧財產局